

According to one aspect of the present invention as defined by claim 1, an ink for an ink jet is provided. The ink comprises a coloring composition comprising: (a) a dispersion medium; and (b) coloring particulates. The coloring particulates comprise (b-1) a polymer which is selected from the group consisting of polyurethanes, polyesters, polyamides, polyureas and polycarbonates; and (b-2) an oil-soluble dye represented by the formula (1) recited in claim 1. Other aspects of the present invention are directed to, for example, a coloring composition (claim 15) and an ink jet recording method (claim 18).

As acknowledged by the Patent Office in the Official Action at page 3, *Sacripante et al* does not disclose or suggest the oil-soluble dye of the formula (1) recited in claims 1, 15 and 18. In this regard, the Patent Office has relied on *JP '552* and *JP '975* for disclosing oil-soluble dyes. However, such alleged combination of *Sacripante et al* with *JP '552* or *JP '975* does not result in the presently claimed invention.

Sacripante et al discloses an ink composition formulated by chemically incorporating a dye into an emulsifiable polymeric resin (col. 3, lines 25-27). *Sacripante et al* also discloses that "the dye is chemically attached to the emulsifiable polymer resin, as either a main chain constituent or a side chain constituent, rather than being separately mixed with a polymer resin" (col. 3, lines 43-46). In light of the above disclosures, it is clear that even if motivation existed to incorporate the *JP '552* or *JP '975* oil-soluble dyes into the *Sacripante et al* ink, this would result in a dye that is chemically attached to the emulsifiable polymer resin.

In stark contrast with the above applied art, claims 1, 15 and 18 recite coloring particulates which comprise a polymer which is selected from the group consisting of polyurethanes, polyesters, polyamides, polyureas and polycarbonates, and an oil-soluble dye

represented by the formula (1). As can clearly be seen from formula (1), the oil-soluble dye is not chemically attached to the polymer. Rather, the recited oil-soluble dye and polymer are separate compounds. Simply put, the combination of *Sacripante et al* with *JP '552* or *JP '975* alleged in the Official Action does not disclose or suggest such feature.

Moreover, *Sacripante et al* discloses the following at column 3 thereof:

Significantly, the present invention provides for improved print quality of the ink by ensuring that there is less free colorant material (i.e., dyes unbound to the polymer chain) that would penetrate further into the print media to reduce print quality and give rise to intercolor bleeding properties.

* * *

Improved print quality may be achieved by chemically bonding the dye into the polymer, such that the dye molecule does not penetrate further into the print media to reduce print quality, and/or cause intercolor bleed with other colors during the drying step of the penetrated image after the image formation step. [emphases added.]

Sacripante et al teaches mitigating the undesirable effects of unbound dyes by chemically bonding a dye to a polymer resin. As such, one of ordinary skill in the art would not have been motivated to modify the ink composition of *Sacripante et al* by employing oil-soluble dyes (such as those disclosed by *JP '552* and *JP '975*) which are not chemically attached to an emulsifiable polymer resin.

For at least the reasons discussed above, it is apparent that no *prima facie* case of obviousness has been established over *Sacripante et al* in view of *JP '552* or *JP '975*.

As acknowledged by the Patent Office in the Official Action at page 3, *Tsutsumi et al* does not disclose or suggest the oil-soluble dye of the formula (1) recited in claims 1, 15 and 18.

Moreover, one of ordinary skill in the art would not have been motivated to combine *Tsutsumi et al* with *JP '552* or *JP '975* in the manner suggested in the Official Action.

In this regard, the Patent Office has alleged that motivation exists to use the dyes disclosed by *JP '552* and *JP '975* in the *Tsutsumi et al* ink composition in light of *JP '552*'s disclosure that the dye produces a printed image that has excellent color tone, reproducibility and resistance to light, as well as in view of *JP '975*'s disclosure that the dye produces a printed image with good hue.

However, *Tsutsumi et al* discloses that the aqueous ink thereof has excellent stability characteristics, and provides prints having excellent image quality characteristics (col. 1, lines 60-63 and Examples). As such, one of ordinary skill in the art would not have been motivated to modify the *Tsutsumi et al* ink by incorporating the *JP '552* and *JP '975* dyes, because *Tsutsumi et al* already discloses that the ink thereof exhibits excellent stability and image quality characteristics. In this regard, it is respectfully noted that the Patent Office has not provided any evidence or scientific reasoning which shows that the use of the *JP '552* and *JP '975* dyes would result in an improvement in the stability and image quality characteristics of the *Tsutsumi et al* aqueous ink. Absent such showing, one of ordinary skill in the art would not have been motivated to employ the *JP '552* and *JP '975* dyes in the ink disclosed by *Tsutsumi et al*.

For at least the reasons discussed above, it is apparent that no *prima facie* case of obviousness has been established. Accordingly, withdrawal of the §103(a) rejections is respectfully requested.

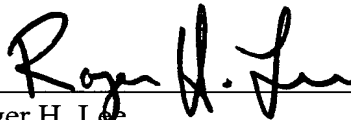
At page 2 of the Official Action, the Patent Office has indicated that a new Notice of References Cited (form PTO-892) citing U.S. Patent No. 6,031,019 has been attached to the

Official Action. However, Applicants' copy of the Official Action did not contain a copy of the new Notice of References Cited. Accordingly, it is respectfully requested that a copy of same be mailed to the undersigned.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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